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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,235	10/01/2003	John R. Allen	Allen-003	6408
26604	7590	01/12/2005	EXAMINER	
KENNETH L. NASH P.O. BOX 680106 HOUSTON, TX 77268-0106			KERNS, KEVIN P	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/676,235

Applicant(s)

ALLEN, JOHN R.

Examiner

Kevin P. Kerns

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/1/03 & 10/31/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The full name of the inventor (family name and at least one given name together with any initial) has not been set forth. In this instance, the inventor's given name (John) has been signed with the abbreviation "J."

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "28" (see Figure 11A). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In this instance, the phrases "The present invention provides" and "In a preferred embodiment, the invention..." should be deleted or replaced, as these are phrases which can be implied (see underlined portion above).

4. The disclosure is objected to because of the following informalities: on page 6, 9<sup>th</sup> line, "any" should be deleted before "listed". On page 7, 7<sup>th</sup> line, "for" should be deleted before "suitable". On page 12, 4<sup>th</sup> line, "10B-10B" should be changed to "12B-12B". On page 12, 13<sup>th</sup> line, "12D" should be changed to "12E". On page 12, 13<sup>th</sup> line, "10E-10E" should be changed to "12E-12E". On page 17, 9<sup>th</sup> line, "10B-10B" should be changed to "12B-12B". On page 17, 12<sup>th</sup> line, "10C-10C" should be changed to "12C-12C". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 13-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 13 and 15 recite the limitation "said tubular". There is insufficient antecedent basis for this limitation in the claims. It is suggested to either a) replace "a workpiece" with "a tubular" in the 3<sup>rd</sup> line of claim 13; or b) replace "tubular" with "workpiece" in the 5<sup>th</sup> and 9<sup>th</sup> lines of claim 13 and the 1<sup>st</sup> line of claim 15. It is more likely that the applicant intended option a), as "said workpiece" is present in the 8<sup>th</sup> line of claim 13 and in claim 18.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3-8, 11-16, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Persson et al. (US 2,756,311).

Persson et al. disclose a high-speed tandem arc welding method and system for welding either planar or tubular workpieces (including portable irrigation tubing capable of holding water under pressure), in which the method and system includes providing a first high energy source (MIG welding portion 10 for depositing an initial elongate weld

bead 19 having a crown and undercut portions 22 along the length of a moving workpiece surface 16 – see Figure 3); and providing a second high energy source (TIG welding portion 12 aligned with and spaced at a fixed distance from the first high energy source and operable to melt an upper portion of the initial elongate beam 19 to produce a smooth conditioned weld bead 18 along the length of the planar/tubular workpiece surface 16 – see Figure 4), such that the radial distance (extending outwardly from the workpiece) of the conditioned weld bead is less than that of the initial weld bead, while the conditioned weld bead width becomes greater than the initial weld bead width (column 1, lines 29-53; column 2, lines 22-71; column 3, lines 48-75; column 4, lines 1-75; column 5, lines 1-35; and Figures 1-7).

9. Claims 13-16, 19, and 20 (insofar as interpreted without a complete translation of the Japanese text, and if claims 13-20 are intended to set forth a “workpiece” rather than a “tubular” – see 35 USC 112 section above) are rejected under 35 U.S.C. 102(b) as being anticipated by Shimada et al. (JP 55-73479).

Shimada et al. disclose a tandem high speed arc welding method and system for welding workpieces, in which the method and system includes providing a first high energy source (MIG welding torch 1 for depositing an initial elongate weld bead 7 having a crown and undercut portions along the length of a moving workpiece surface); and providing a second high energy source (TIG welding torch 5 aligned with and spaced at a fixed distance from the first high energy source and operable to melt an upper portion of the initial elongate beam 7 to produce a smooth conditioned weld bead

along the length of the workpiece surface), such that the radial distance (extending outwardly from the workpiece) of the conditioned weld bead is less than that of the initial weld bead, while the conditioned weld bead width becomes greater than the initial weld bead width (abstract; and Figures 1 and 2).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2, 9, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persson et al. (US 2,756,311) in view of Beyer et al. (US 5,821,493).

Persson et al. disclose the features of independent claims 1, 6, and 13 above. Persson et al. do not disclose the use of a laser beam welder as the first (initial) high energy source.

However, Beyer et al. disclose a hybrid laser and arc process and system for welding workpieces, in which the process/system includes providing a laser beam welder 14 as a first (initial) energy source (Figure 3) to create a weld seam 12, such that providing a laser beam welder as one of the high energy sources is advantageous for obtaining higher speeds at reduced power, higher efficiency, low operating costs, and the ability to bridge even larger gaps between workpieces to be welded (abstract;

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column 1, lines 13-17 and 46-67; column 2, lines 1-67; column 3, lines 1-67; column 4, lines 1-20 and 57-67; column 5, line 1 through column 8, line 23; and Figures 1-8).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the high-speed tandem arc welding method and system for welding either planar or tubular workpieces, as disclosed by Persson et al., by using a laser beam welder as the first high energy source, as taught by Beyer et al., in order to obtain higher speeds at reduced power, higher efficiency, low operating costs, and the ability to bridge even larger gaps between workpieces to be welded (Beyer et al.; column 2, lines 8-23 and 48-57).

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al. (JP 55-73479) in view of Beyer et al. (US 5,821,493).

Shimada et al. disclose the features of independent claim 16 above. Shimada et al. do not disclose the use of a laser beam welder as the first (initial) high energy source.

However, Beyer et al. disclose a hybrid laser and arc process and system for welding workpieces, in which the process/system includes providing a laser beam welder 14 as a first (initial) energy source (Figure 3) to create a weld seam 12, such that providing a laser beam welder as one of the high energy sources is advantageous for obtaining higher speeds at reduced power, higher efficiency, low operating costs, and the ability to bridge even larger gaps between workpieces to be welded (abstract;



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column 1, lines 13-17 and 46-67; column 2, lines 1-67; column 3, lines 1-67; column 4, lines 1-20 and 57-67; column 5, line 1 through column 8, line 23; and Figures 1-8).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the tandem high speed arc welding method and system for welding workpieces, as disclosed by Shimada et al., by using a laser beam welder as the first high energy source, as taught by Beyer et al., in order to obtain higher speeds at reduced power, higher efficiency, low operating costs, and the ability to bridge even larger gaps between workpieces to be welded (Beyer et al.; column 2, lines 8-23 and 48-57).

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin P. Kerns *Kevin Kerns 1/8/05*  
Examiner  
Art Unit 1725

*KPK*  
kpk  
January 8, 2005